EXHIBIT E

Verizon LBS/aGPS Service (4G location)

Introduction

What is Verizon LBS/aGPS(4G location) service?

Problem being addressed:

Business owners want to periodically securely locate and track their devices. The asset or device needs to be located quickly and accurately given either environment, indoor or outdoor. Current capabilities provide limited accuracy or demand high battery and processing power.
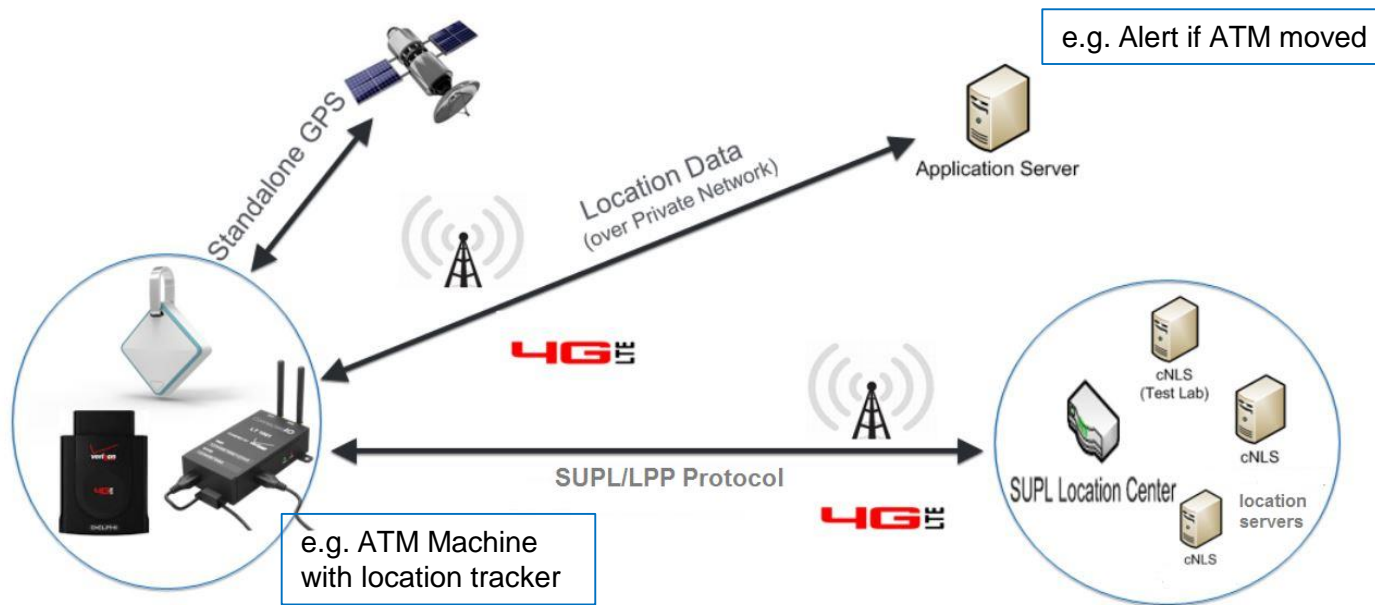
The Solution:

Verizon LBS/aGPS (using SUPL - Secure User Plane Location) service offers commercial location-based services providing assistance to devices in acquiring it's location quickly and accurately using 4G SUPL platform. The service is an alternate approach if 'coarse location' does not meet the business needs.

Who is Interested?

- Existing customers wanting to add or update location solution to the device

- New customers wanting to offer location service embedded in the device

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How does Verizon 4G location work?

When a device wants to locate it's positon, assistance is provided by Verizon Network to device during location search for faster time to fix and improve accuracy than un-assisted mode. Depending on the mode chosen by application/device, the final location fixes may be obtained form Verizon LBS servers in the network and provided to device or device itself can calculate fixes using assistance data from the network.

4G Location capabilities – To augment existing standalone GPS solution, 3gpp Release 9 LTE standards adds commercial MS-assisted and MS-based aGPS, Observed Time Difference of Arrival (OTDOA), and Enhanced Cell ID solutions (using 4G SUPL).   OEMs can also use these and Hybrid (combination of methodology) to allow for better location for indoor and/or outdoor environments than standalone or legacy techniques (e.g. 3G-based, Cell ID, etc.).

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Why 4G location? (standalone vs. assisted)

Standalone GPS/GNSS (no assistance)

- Longer time to first fix (TTFF)
- No location at all if no visibility of GPS satellites (need at least 4)
- Can be less accurate – dependent on clear line-of-sight of satellites
- Demands high battery and processing power
- Legacy design - behind industry trends and standards

Network Assisted (using 4G location)

- Provides faster time to first fix and accurate location
- Can obtain fix even with no visible satellites (indoors).
- Can use hybrid mode (network assistance + satellites)
- Provides more accurate location (can be within 10s of meters).
- Helps conserve battery power
- Provides road-mapping to build more robust solution using other location technologies being worked in standards (e.g., Sensors, Bluetooth, WiFi, etc).

Positioning methods

Positioning Methods	Time to Fix (seconds) (67th- 95th percentile)	Accuracy Error(meters) (67th-95th percentile)	Dependency
Standalone GPS	-Up to 500 seconds during cold start - ~1 second when tracking	25-110	A GPS receiver and clear line of sight required
MS Based AGPS	7.4-19.8	42-103	A GPS receiver and Network required
MS Assisted GPS	9.2-28.1	65-165	A GPS receiver and Network required
OTDOA Only/ OTDOA + PRS Muting	1.4-1.5	250-350/ 235-270	Purely Network-based
ECID	0.01-0.02	500-950	Purely Network-based
CID*	0.01-0.02	Ave 1000m	Purely Network-based (aka Coarse Location)

Coarse location (Cell ID - ave range of 1000meters) for M2M/IoT devices is available through ThingSpace API. For more, visit https://thingspace.verizon.com/develop/apis/location

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Currently available enabler/hardware platforms supporting Verizon architecture*

Vendor	Module	Category	4G Location Capabilities	Comments
Quectel (QCOM 9307-1)	EC21-V	Cat1	aGPS, OTDOA, ECID, Cell ID	VoLTE (with e911) Supported
Quectel (QCOM 9307)	EC25-V	Cat4	aGPS, OTDOA, ECID, Cell ID	VoLTE (with e911) Supported
Sierra Wireless (QCOM 9615)	MC7354	Cat4	aGPS, ECID, Cell ID	LTE/CDMA(fallback) supported
Sierra Wireless (QCOM 9230)	MC7455	Cat6	aGPS, OTDOA, ECID, Cell ID	LTE/CDMA(fallback) supported
QCOM 9206-based		Cat-M1		In Progress

*platforms continue to expand

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Location Based Service with Private Network

Combined with Verizon's Private Network capability provides added security and can deliver a more robust location solution:
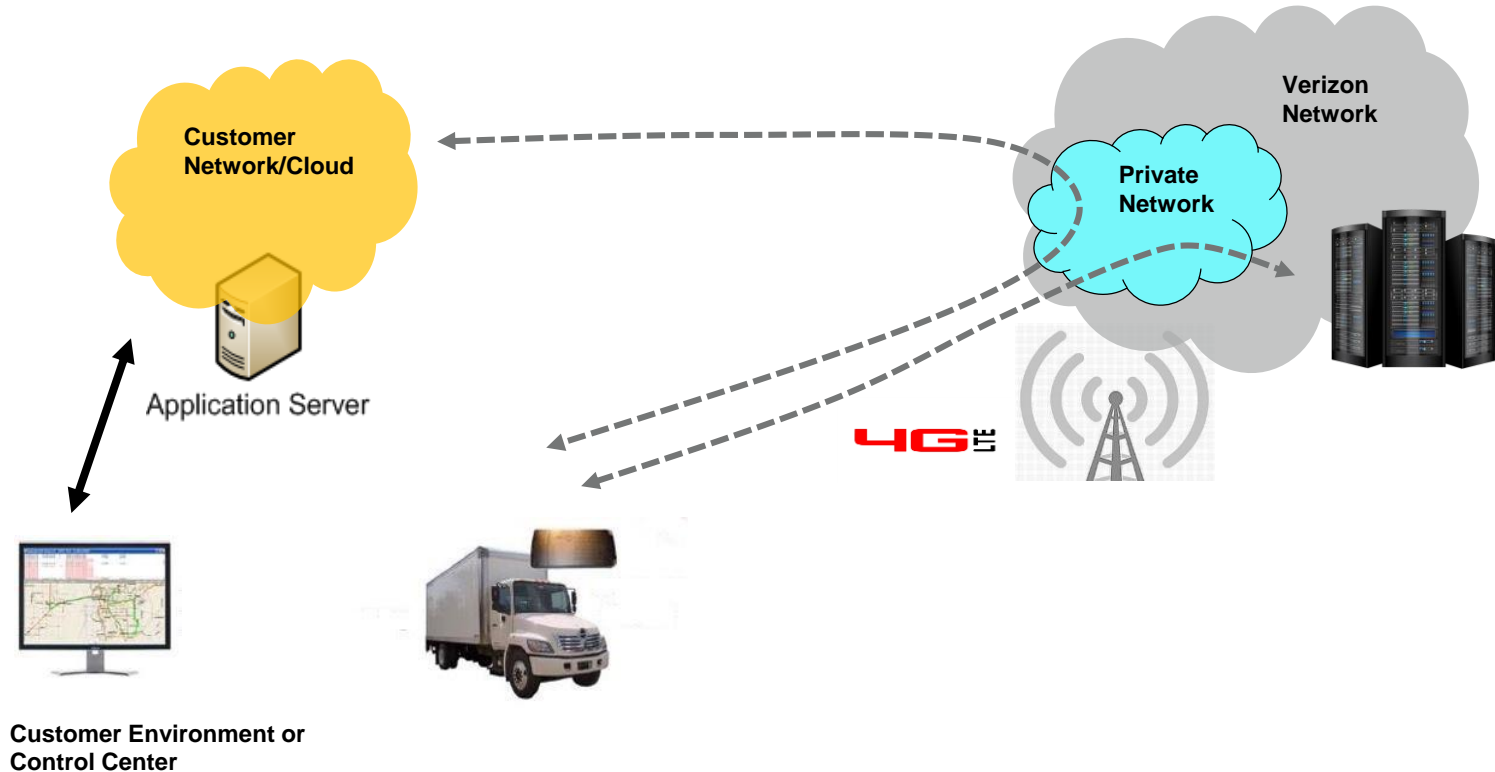
For Private Network Overview:

https://www.Verizonwireless.com/biz/security/wireless-private-network-vpn/
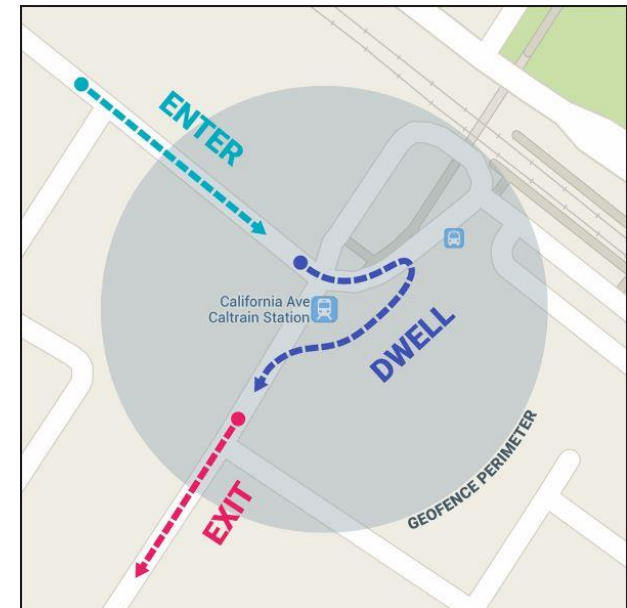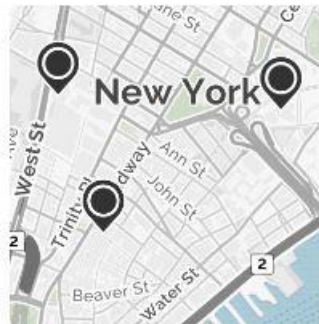
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Integrate with MapQuest APIs

- The MapQuest APIs let you incorporate location-based functionality into your applications. The Industry-leading geospatial MapQuest platform includes the tools, resources and expertise needed to build rich and engaging solutions across Web, mobile Web, native mobile, and desktop interfaces.

 Use MapQuest APIs to build Geo-fencing around your device location:

Use MapQuest APIs to look-up address of your device location:

Other APIs: Static Map, Geocoding, Search Ahead, Traffic, for more visit:

https://thingspace.verizon.com/develop/apis/mapquest/v1/index.html

https://developer.mapquest.com/

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Considerations and additional information

To get more information on the Verizon LBS/aGPS (4G Location) service please contact Open Development Device Marketing at:

verizonwireless-opendevelopment@verizonwireless.com

The App developer/device OEM will need to ensure:

✓ **Hardware solution is based Verizon approved Module or Chipset Architecture**

✓ **Device hardware has been certified or is being certified by Verizon Open Development Team**

✓ **Device is capable of supporting Verizon Private Network**

For additional certification information:

LBS/aGPS (4G Location) Certification details (login required):

https://odi-device.verizonwireless.com/Home/RetrieveDoc?docname=documentation.htm

Additional Chipset/Modules are available at:

https://opendevelopment.verizonwireless.com/device-showcase

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Thank you.

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